DOCUMENT RESUME

ED 432 919 FL 025 935

AUTHOR Young-Scholten, Martha
TITLE Focus on Form and Linguistic Competence: Why Krashen Is Still Right about Acquisition.
PUB DATE 1999-03-08
NOTE 16p.; Paper presented at the Annual Meeting of the American Association for Applied Linguistics (21st, Stamford, CT, March 1999).
PUB TYPE Information Analyses (070) -- Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Learning; Child Language; Foreign Countries; *Language Acquisition; *Language Processing; Language Research; *Learning Processes; Metalinguistics; Second Language Learning; *Second Languages
IDENTIFIERS Krashen (Stephen)

ABSTRACT

A review of research on the development of linguistic competence in second language learners looks at the role played by input to children in their development of linguistic competence, the nature of children's metalinguistic development, and the same processes in the naturalistic second language learning of adults, and then examines the role of a focus on form in second language teaching in developing linguistic competence. Discussion of the development of first-language competence draws on the study of universal grammar and of development of attentional capacities and sensitivity to shifts in input. Children's metalinguistic development is explored through research on metacognition and meta- and epilinguistic awareness. Evidence of the utility of focus on form in assisting adult second language learners in their quest for "fluent accuracy" is considered, and approaches to combining naturalistic language learning with this focus on form are suggested. (Contains 4 tables and 46 references) (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 432 919

Focus on Form and Linguistic Competence: Why Krashen is still right about acquisition

Martha Young-Scholten
University of Durham, UK
martha.young-scholten@durham.ac.uk
Paper presented at AAAL, Stamford March 8, 1999

1. Introduction

In Schwartz's (1993) theoretical discussion of Krashen's acquisition-learning distinction she points out that two distinct types of input are relevant to the formation of linguistic competence and to the building up of learned linguistic knowledge. There is no interface possible; learned linguistic knowledge cannot become linguistic competence. We really have no evidence to the contrary. This doesn't mean that learned knowledge cannot become automated. Nor does it mean we have to completely abandon attempts to manipulate things in the classroom that affect learners' linguistic competence.

What is the task we are up against when we attempt to manipulate in various ways the input adult second language learners receive? Unless we assume adults acquire second languages in ways fundamentally different to how children do so, it's crucial to address two aspects of children's development of language. First, what role does the input children receive play in their development of linguistic competence? Second, what is the nature of children's metalinguistic development? In considering the role of input and of metalinguistic knowledge, studies of naturalistic second language learning adults are also relevant and will also be considered in this paper.

Insights from the study of the development of metalinguistic awareness by first language learners are particularly helpful in light of the numerous recent proposals that the second language learner must consciously attend to, notice or be aware of the form of utterances rather than just their meaning in order for their interlanguage grammars to undergo development (see e.g. Schmidt 1990). In other words, *learning* (in Krashen's sense) must take place for *acquisition* to occur. This idea - that forms in the input have to be noticed for input to become intake - doubtless originates in disappointment with what the combination of several decades of content-based language teaching and second language research have wrought. These frustrations should not be taken lightly; in fact, it

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
Martha Young-Scholten
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

will become clear that the point of my paper is that they should be taken even more seriously. But evidence in support of form-focused teaching is meagre. On the other hand, evidence continues to grow in support of the idea that adults acquire second languages in ways highly similar to how children acquire a first language. And when we propose on the basis of this evidence that L2 adults have access to Universal Grammar we are forced to conclude that the adult second language learner's mind must, like the child's, be modular.

Of course the adult's mind is not exactly like the child's mind, and one of the ways in which it is different is the higher degree of conscious awareness and control adults tend to have of their own behavior. It is the ability to reflect on language that sets up the irresistible temptation to solve the problem of adult lack of L2 success in this way. What adults fail to acquire might have nothing to do with UG. But while it may be the case that what adults fail to acquire is not directly related to universal principles and parameters of, say, syntax, it does *not* follow that what adults fail to acquire lies outside of linguistic competence. It makes best sense here to look at how children acquire what adults don't, and to do so in view of the input. When the unsolved mysteries of L1 success and L2 failure are finally untangled we may find that we will have to settle for encouraging adult L2 learners to automate learned knowledge, realizing that this will always be an imperfect substitute for linguistic competence.

2. The development of linguistic competence in a first language

What do we know about how children make use of their input? It's clear from the moment at which children's behavior can first be observed that they already have some tools for dissecting the stream of speech. When the child starts to utter its first words, that these words are typically nouns and thematic verbs shows that the child can at some subconscious level distinguish nouns and verbs from articles and auxiliaries. Once the child strings her first words together, she further reveals uncanny knowledge of the head-complement order of the ambient language. How does the child figure these things out? One familiar proposal is that the child is born knowing *what* to look for in the form of the Principles and Parameters of Universal Grammar (Chomsky 1981). But the child must

also know *how* to look. From Slobin's Operating Principles to more linguistically-oriented proposals such as Pinker's (1984) and Gleitman's (1990), recent work is uncovering even more about the tools children use.

A window on this is provided by the high amplitude sucking and head-turning techniques designed to determine what the growing infant comes to be aware of. This awareness, as signalled by the infant's increased rate of sucking in response to a stimulus (or turning towards a stimulus) which it perceives to be novel, is of course neither conscious nor volitional. Findings such as those shown in Table 1. indicate that the child amasses a good deal of information about its language before words are produced between the ages of 10 and 12 months, and even before words are comprehended between 8 and 10 months.

Table 1. Infants' attention to speech signals (from studies discussed in Jusczyk 1997)

AGE	PERCEPTUAL SENSITIVITY
new borns	own mother's prosody
2 months	word boundaries (night rate vs. nitrate)
4 1/2 months	prosodic pattern of own name
6 months	own language prosody (American English distinguished from Norwegian)
7 1/2 months	-able to pick out words from fluent speech using phonotactic cues (not main stress) -selective attention to speech directed to them, even with background noise
6-9 months	own language phonetic and phonotactic cues (Dutch distinguished from English)
8- 10 months	*first words are comprehended*
9 months	own language stress (English trochaic strong-weak stress)
10 1/2 months	word boundary detection overrides pretonic unstressed syllables (guitar)
10-12 months	*first recognizable words are produced*

That these findings don't merely represent the unfolding of perceptual skills is suggested by the results of studies on infant retention shown in Table 2. In one study, details of various syllables presented were retained over delays of up to two minutes by 2-month old infants. The second study in the table involved a story read to children daily for ten days. Two

Table 2. Infants' verbal memory

AGE	memory performance
2 months	details of different syllables presented to infant retained for two minutes
8 months	words presented to child in story recognized after two week delay

BEST COPY AVAILABLE

weeks later when children heard isolated words from this story they revealed they were recalling words based on adult-like storage of them for two reasons 1.) the majority of the words in the recall test did not have sentential stress in the story sentences, and 2.) recall words altered by their initial consonant failed to elicit a response from the children.

There is still a great deal to be learned about how children's attentional capacities develop. Salience of elements in the input is often mentioned, but children somehow attend to and of course acquire things that are *not* salient. Tackling syntactic development Lightfoot (1999) reiterates the well-known observation that children literally attain infinitely more than they experience; the input children receive underdetermines their resulting competence. For example, experience simply does not tell the children that pronouns sometimes don't co-refer: there's evidence in the input that pronouns *may* refer to a preceding noun, as shown in (1a), but there is nothing in the input that tells the child when pronouns may not do so, as in (1b).

(1) a. Terry's$_i$ sister congratulated her$_{i}$
b. *Terry$_i$ congratulated her$_{i}$'

An explanation based on corrective feedback fails here because children don't produce the relevant overgeneralized utterances, so parental correction is never even called upon. This is one of many well-known examples which illustrate that there simply isn't enough there in the input for an inductive account of language acquisition. An inductive account can't even explain how children learn the meanings of concrete nouns like 'doggie' (P. Bloom 1994).

(2) 'See the doggie!' Context: adult points to a furry four-legged creature sitting on the grass gnawing a bone

- 'see' or 'the' could refer to the four-legged creature
- 'doggie' could refer to:
  - part of the entity
  - the entity plus its surroundings
  - a sub- or superordinate kind
  - an unstable entity

If the child hears 'See the doggie' in the presence of an adult pointing to a furry four-legged creature, to acquire the word 'doggie' the child has to figure out a number of things

and exclude all the possibilities shown in (2). The idea is that various constraints prevent the child from considering these.

Lightfoot considers how the input interacts with the child's predisposition to acquire language in terms of 'triggering experience'. A trigger consists only of the kinds of things children routinely experience in the input. Under Lightfoot's model, the child scans its environment for designated structures or 'cues' found in simple syntactic domains. These aren't necessarily salient elements; in fact, Lightfoot proposes that children are programmed to scan for clitic-like, unstressed highly assimilable inflectional morphemes. One input factor noted by Lightfoot is children's sensitivity to statistical shifts in the input. In their 1977 study Newport, Gleitman and Gleitman showed that children's acquisition of verbal auxiliaries was accelerated when their mothers asked more yes/no questions. The salience of initial position is also relevant, but frequency is also relevant. Note that this effect is indirect; what children acquire at this point isn't yes no questions.

Statistical shifts in the input are involved in historical change. For example, Lightfoot points out that verb second was lost in English as the result of preverbal non-subject constituents declining to a frequency of only 17% in the input. Such variation in the input may give rise to acquisition situations where two grammars exist and compete with each other. According to Lightfoot, the optionality regularly observed in the child's emerging grammar is a function of co-existing grammars. What forces the child to choose one a grammar is Aronoff's Blocking Effect, which is part of children's pre-wiring. The Blocking Effect, for example, both explains the non-existence of morphological doublets in adult languages and the child's elimination of an overgeneralized form such as 'goed' from her lexicon when 'went' is acquired. Yet Kroch (1994) points out that doublets actually do occur, but in different registers, styles or social dialects. The stable optionality or variability found in adult interlanguages is a focal pedagogical issue in terms of adult learners' failure to converge on the target-language norm. At least two possible explanations exist for the variability found in second language acquisition: 1.) the observed variability is dependent on register, style or social dialect, along the lines of Tarone's work or 2.) the Blocking Effect weakens with age. Interesting work by Sorace (1998) also suggests optionality may affect the L2 learner's L1.

3. Children's metalinguistic development

Is there any evidence that conscious awareness or attention plays an important role in the L1 development of linguistic competence? Under Flavell's definition, metacognitive awareness involves:

> One's knowledge concerning one's own cognitive processes and products or anything related to them, e.g. the learning-relevant properties of information or data. Metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to cognitive objects... (Flavell 1976:232)

The highly developed, consciously controlled metalinguistic repertoire that older children and adults possess (to varying degrees) involves focus-on-form by its very definition. Claims from second language pedagogy that require a form to be consciously attended to be acquired implicitly assume the L2 learner is drawing on metalinguistic abilities. If, however, we find that metalinguistic awareness in children develops *after* linguistic competence, the idea that metalinguistic abilities can somehow be employed by adult second language learners *before* linguistic competence develops to result in linguistic competence becomes highly problematic.

Gombert's (1992) view, based on his comprehensive treatment of the emergence of metalinguistic ability is that this ability develops *after* linguistic competence has been established, since one cannot use knowledge which one does not have. According to Gombert the individual passes through three stages. Children start at an initial stage of epilinguistic awareness, which does not involve conscious awareness or intentional manipulation of language as an object. The final stage is one at which metaprocesses become automatic.

(3) linguistic competence ⇒ epilinguistic awareness
⇩
metalinguistic awareness
⇩
automation of metaprocesses

His review of studies of children's metaphonological, metasyntactic, metalexical, metasemantic, metapragmatic and metatextual development all seem to point to

unconscious epilinguistic awareness of some aspects of language once the relevant linguistic competence has been established, as shown in Table 3. The first row shows the precursors to epilinguistic awareness, revealing children's responses during tasks designed to measure their syntactic competence. Epilinguistic awareness appears to emerge without schooling, although this is problematic, given that the source of most data is children in literate societies.

Table 3. Children's development of epi- and metalinguistic skills

AGE/ years	SKILLS
2-3	children reject ill-formed sentences on the basis of comprehension failure; responses on grammaticality judgement tasks reflect tapping of tacit knowledge
up to 5	-children reject ill-formed sentences based on semantic content -awareness of syllables and subsyllabic units
6-7	-form and content begin to be separated, e.g. for syntax, phonology, semantics

That the cognitively mature individual can treat language purely as an object is evidenced by the fact that metalinguistic knowledge can exist without accompanying linguistic competence. Certainly linguists - and linguistics students - attain such knowledge when undertaking in-depth analyses of specific aspects of a language or languages. But there isn't any evidence that such activity leads to linguistic competence. Thus while epi- and metalinguistic behaviour can be observed to accompany purely linguistic behaviour, the causal relationship which Schmidt's (1990) Noticing Hypothesis assumes for second language acquisition has not been found for first language acquisition.

4. Second language acquisition

If adult second language acquisition is fundamentally different from first language acquisition (e.g. Bley Vroman 1989) and the learner cannot make use of the same subconscious mechanisms which guide first language acquisition then of course there is no alternative but to attempt to engage other abilities in the task of mastering a second language, however ill-suited these abilities may be for the development of linguistic competence.

Let's, however, suppose second language acquisition is fundamentally similar to first language acquisition, except for the fact that learners in this case already know another

BEST COPY AVAILABLE

language. Based on data from a variety of sources from adult learners in both instructed and naturalistic settings, lots of second language researchers (even when subscribing to the Critical Period Hypothesis) hold the view that it is similar, that UG remains accessible. This view has both indirectly and directly influenced second language teaching in many parts of the world. Yet it is also apparent that adult second language learners very often fail to attain native proficiency and thus we have begun to witness the return of grammar to the classroom in the guise of focus on form(s).

5. Focus on form(s) to the rescue?

How can adult second language learners be helped in their quest for *fluent accuracy*? Clearly for many adult learners metalinguistic knowledge in a second language can be developed. Whether this knowledge, this attention to form(s), can be harnessed to result in linguistic competence has not been shown - and we don't really expect it to be shown. Indeed the proposal that L2 learners will benefit from explicit knowledge of the L2 system would mean that L2 development is "essentially different" from L2 development (Jordens 1996:427). Importantly (as noted in Ellis and Laporte 1997) it has been demonstrated repeatedly that there is little or no effect of instruction on *route* of acquisition. These results are indicative of the powerlessness of instruction to influence the learner's underlying linguistic competence. What have the studies on the manipulation of input in adult second language acquisition shown? It seems that successes in the form-focused manipulation of input are illusory in terms of affecting linguistic competence; we find that:

(4) •performance is affected in some manner (e.g. omission changes to oversuppliance)
- •improved performance is temporary
- •simple things are mastered (automatic production based on learned knowledge)
- •changes are superficial, with no reorganization of the learner's grammar
- •acquisition of structures occurs when the learner's just about to anyway (Pienemann)

In other words, there's evidence that form-focused instruction involves 'learning' rather than 'acquisition'. Even when the learner's L1 knowledge creates a learnability *cul de sac* such that the input the (non-instructed) learner receives is unable to correct the learners' false L1 assumptions (White 1989), results have not been any more promising. If, for

example, the learner's native language is French and allows the possibility of adverbs intervening between the verb and the direct object, as in (5a), never having heard a native English speaker utter (5b) won't lead the learner to conclude it's not possible in English.

(5) a. Marie fait lentement ses devoirs.
b. *Mary does slowly her homework.
c. Mary slowly does her homework.
d. Mary does her homework slowly.
e. Mary is slowly doing her homework.

The learner can easily be misled by the otherwise free adverb placement in English the sentences in (5c), (5d) and (5e) illustrate. Common sense suggests that getting the learner to notice that 'Mary does slowly her homework' is ungrammatical should do the trick. Yet White (1991) attempted to accomplish just this, Schwartz and Gubala-Ryzak (1992) then revealed that the attempt failed. Learners needed to reorganize their grammars to stop raising main verbs as if English were French, but their performance revealed changes were purely superficial.

Why doesn't providing explanations or corrective feedback work? Because it's not the type of evidence the mind uses to construct linguistic competence; it's not the input involved in the learner's triggering experience. How do we know what this is? We can't look at first language acquisition because children don't get themselves into such learnability cul de sacs. However, if younger French learners of English successfully delearn French verb raising in English, we want to know what in the input prompts them to do so.

6. Naturalistic learners and triggers

What do we know about how adult second language learners make use of elements in the input in developing linguistic competence? In assuming that the underlying linguistic mechanisms for adults are fundamentally similar to those children use, we assume that the process will be much the same, that adult second language learners scan the input for cues. In our study of various adult second language learners' acquisition of functional projections in German, Vainikka and Young-Scholten (e.g. 1996; 1998) adopt a structure-building

approach which involves L1 transfer only at the start of acquisition. The utterances in (6a) and (6b) show the learner initially projects just a lexical projection, VP, whose headedness corresponds to that of learner's L1 VP. Korean learners, with their head-final VP start out projecting a head-final VP, while English learners project a head-initial one.

6a. Haar schoen machen. Changsu #124 (L1 Korean)
hair pretty make-INF
(Sie macht die Haare schoen.)
'She's making her hair look pretty.'

b. Peter lernen die Buch. Paul 1 (L1 English)
Peter learn-INF the book.
(Peter liest das Buch).
'Peter reads the book.'

Because the German VP is head-final, learners whose L1 VPs are head-initial go through an additional step, when they switch the headedness of the VP to final, as shown here:

7. Er kann ein Bike, ein Motofahrrad fahren. Paul 3 (L1 English)
He can a bike, a motor-bicycle drive-INF
(Er kann Motorrad fahren.)
'He can ride a motorcycle.'

The utterances in (8a) and (8b) show development involving a functional projection not based on the learners' L1s (see Vainikka and Young-Scholten 1996 for details).

8a. Jetzt brau Wohnungsamt fragen. Sevinc #111 (L1 Turkish)
now need-0 housing-authority ask-INF
(Jetzt brauch ich das Wohnungsamt zu fragen.)
'Now I need to ask the housing authority.'

b. Ein Men liebe das Kuchen für Frühstück Paul 3 (L1 English)
a man love-1SG the cake for breakfast
(Ein Mann liebt den Kuchen zum Frühstück)
'The man loves cake for breakfast.'

To build syntactic structure, the learner scans the input in the three UG-related steps shown below, searching for positive evidence on the basis of which to posit syntactic structure (Chomsky 1986; Grimshaw 1993, Speas 1993).

1. a head, once identified in the input, projects a maximal projection
2. a complement position is posited based on positive evidence
3. a specifier position is posited based on positive evidence

Like Lightfoot, we adopt the idea that parameters *designate* what type of input will cause a particular change in the learner's grammar. (See also Clark & Roberts 1993; Gibson & Wexler 1994; Janet Fodor 1992.) Because triggers have to be robust in the input, elements which act as triggers will appear in the learner's production prior to their influence on the learner's underlying grammar. Crucially, a functional projection for which there is no morphosyntactic evidence in the input cannot be posited by the language learner. As shown in Table 4, for children acquiring German as their first language, the triggers for functional projections would be inflectional suffixes and clitics, that is unstressed, bound morphemes; these are the clitic-like inflectional elements Lightfoot says the child scans the data for.

Table 4. Triggers for positing projections in L2 German (Vainikka & Young-Scholten 1998)

Projection	Trigger in child German	Trigger in L2 German
VP	stress pattern	L1 bootstrapping
FP	3SG *-t*	modals
AgrP	agreement paradigm	copular paradigm
CP	object clitics	complementizers

While adults go through the same three steps given above, they seem unable to make use of the same elements as triggers. Rather, they make use of free inflectional morphemes. At least in German free morphemes seem able to act as triggers. There may be problems, though. From our data on the acquisition of CP (and of V2) in German there are some indications that adult learners have problems with this projection. It may therefore be the case that the trigger we have proposed for CP for L2 adults simply fails to accomplish the task, unlike clitics do for children. Is use of different triggers by adults what leads to the differences in L1 and L2 development that we and others have found? These are the differences which can't always be traced to the learners' native languages. So while L1-L2 differences in development have been claimed by some (e.g. Clahsen and Muysken 1986) to reflect lack of access to UG, we propose that these differences are the result of what adults are forced to use as triggers.

Why should children and adults make use of different triggers? Evidence from exceptional L2 learners suggests that children and exceptional learners process the input 'better' than normal second language learning adults do. The exceptional abilities of

BEST COPY AVAILABLE

learners who acquire second languages to native proficiency well after the age of puberty revolve around the learning of new codes, simple pattern analysis/learning and verbal memory; most notably this involves retention of verbal material, even after a time interval, for example weeks later when there had been no emphasis in the learning that recall would be required. Such learners exhibit only average performance on tests used to measure analytic skills with language and on tests to measure short term memory (digit span tests). The results from eight-month-olds' recall of words in stories and the results of verbal memory tests from exceptional learners indicates that these exceptional individuals have retained their infant abilities to scan the input for unstressed clitic-like inflectional elements.

7. What now?

What do these findings suggest about how research on the manipulation of input in the classroom might proceed? While work by Pienemann perhaps seems of interest, it's clear that simply increasing rate of acquisition is not what we're after. We are *after fluent accuracy*. But we may be faced with a problem which cannot be solved:

> **The Intractable Problem of Post-Puberty Second Language Mastery**
> What cannot be acquired cannot be learned either because only linguistic mechanisms are able to accomplish this task; general cognitive devices cannot cope.

This is essentially no different from what Krashen said relation in relation to his acquisition-learning hypothesis some 15 years ago. If it were actually possible to automate behavior based on learned linguistic knowledge in complex areas of syntax and morphosyntax, then the problem would, of course disappear. Perhaps, however, it is possible to influence the learner's processing of the input in such a way that *acquisition* actually results. Approaches such as VanPatten and colleagues' and Long and colleagues' which do so are on the right track in terms of emphasis on input processing and focus on form, rather than focus on forms. Studies of very intensive form(s)-focused instruction - such as Ioup's, involving defossilization of article and tense errors are also promising. Perhaps things which are not acquired can indeed be mastered through automation of metaprocesses when enough time is devoted to the task.

Yet we are essentially working the dark until we've unravelled all the details of how children develop their first and especially their second languages. Results from studies yet to come will yield more than the implications the field of second language research has thus far yielded aplenty and start to offer some possible classroom applications.

8. References

Bialystok, E. (1986). Factors in the growth of linguistic awareness. *Child Development*. 57:498-510.

Bley-Vroman, R. (1989) What is the logical problem of foreign language learning? In S.M. Gass and J. Schachter (eds.) *Linguistic Perspectives on Second Language Learning*., Cambridge: CUP.

Bloom, P. (1994). Recent controversies in the study of language acquisition. In M. A. Gernsbacher (ed.) *Handbook of Psycholinguistics*. London: Academic Press. pp. 741-773.

Chomsky, N. (1981). Principles and parameters in syntactic theory. In N. Hornstein and D. Lightfoot (eds.) *Explanation in Linguistics*. London: Longman. pp. 123-146.

Chomsky, N. (1986) *Knowledge of Language. Its Nature, Origin and Use*. New York: Praeger Publishers.

Clahsen, H. (1991) Constraints on Parameter Setting. A Grammatical Analysis of Some Acquisition Stages in German Child Language, *Language Acquisition* 1:361-391.

Clahsen, H. & P. Muysken. (1986) The availability of universal grammar to adult and child learners: a study of the acquisition of German word order, *Second Language Research* 2:93-119.

Clark, R. & I. Roberts (1993) A computational model of language learnability and language change, *Linguistic Inquiry* 24:299-345.

Crain, S. (1993) Language acquisition in the absence of experience. In P. Bloom (ed.) *Language Acquisition: Core Readings*. London: Harvester Wheatsheaf.

Ellis, N. C. and N. LaPorte (1997). Contexts of acquisition: effects of formal instruction and naturalistic exposure on second language acquisition. In A.M.B. de Groot and J. F. Kroll (eds.). *Tutorials in Bilingualism. Psychologistic Perspectives*. Mahwah, NJ: Erlbaum. pp. 53-83.

Ellis, N. C. and S. Sinclair (1996). Working memory in the acquisition vocabulary and syntax: Putting language in good order. *Quarterly Journal of Experimental Psychology* 49A: 234-250.

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In B. Resnick (ed.) *The Nature of Intelligence*. Hillsdale, NJ: Erlbaum.

Fodor, J. (1992). How to obey the subset principle: binding and locality, CUNY ms.

Freudenstein, R. Success of differing approaches to language learning (methods). In B. Ketteman and I. Landsiedler (eds.). *The Effectiveness of Language Learning and Teaching*. Graz: Zentrum fuer Schulentwicklung/Bundesministerium fuer Unterricht und kulturelle Angelegenheiten. No. 27 pp. 69-78.

Gibson, E. & K. Wexler (1994). Triggers, *Linguistic Inquiry* 25:405-454.

Gleitman, L. (1990). The structural sources of verb meanings. *Language Acquisition* 1:3-55.

Goswami, U. and P. Bryant. (1990) *Phonological Skills and Learning to Read.* London: Erlbaum.

Grimshaw, J. (1993). Minimal projection and clause structure. In B. Lust, M. Suñer and J. Whitman (eds.) *Heads, Projections and Learnability.* Hillsdale, NJ: Erlbaum.

Havranek, G. (1998). The effectiveness of corrective feedback: preliminary results of an empirical study. Paper presented at *EUROSLA 8*, Paris 11 September.

Ioup, G., E. Boustagui, M. El Tigi, and M. Moselle (1994). Re-examining the critical period hypothesis: A case study of successful adult SLA in a naturalistic environment. *Studies in Second Language Acquisition.* 16.73-98.

Jordens, P. (1996) Input and instruction in second language acquisition. In P. Jordens and J. Lalleman (eds.) *Investigating Second Language Acquisition.* Berlin: de Gruyter.

Jusczyk, P. W. (1997) *The Discovery of Spoken Language.* Cambridge: MIT Press.

Krashen, S. (1985) *The Input Hypothesis: Issues and Implications.* London: Longman.

Larsen-Freeman, D. (1995) On the teaching and learning of grammar: Challenging the myths. In F. Eckman, D. Highland, P. W. Lee, J. Mileham, R. R. Weber (eds.) *Second Language Acquisition: Theory and Pedagogy.* Hillsdale, NJ:Erlbaum.

Lightfoot, D. (1989). The child's trigger experience: Degree-0 learnability. *Behavioral and Brain Sciences* 12:321-375.

Lightfoot, D. (1999). *The Development of Language.* Oxford: Blackwell.

Long, M. and G. Crookes (1991). Three approaches to task-based syllabus design. *TESOL Quarterly* 26:27-55.

Menyuk, P. (1985). Wherefore metalinguistic skills? A commentary on Bialystok and Ryan. *Merrill-Palmer Quarterly.* 253-259.

Newport, E., L. Gleitman and H. Gleitman. (1977). Mother, I'd rather do it myself: some effects and non-effects of maternal speech style. In C.E. Snow and C.A. Ferguson (eds.). *Talking to Children. Cambridge*: Cambridge University Press.

Obler, L. (1989) Exceptional second language learners. In S. Gass, C. Madden, D. Preston and L. Selinker (eds.) *Variation in Second Language Acquisition: Psycholinguistic Issues.* Clevedon: Multilingual Matters.

Pienemann, Manfred. (1987) Psychological constraints on the teachability of languages. In Carol Pfaff (ed.) *First and Second Language Acquisition Processes.* London: Newbury House. p. 143-168.

Pinker, S. (1984) . *Language Learnability and Language Development.* Cambridge, MA: Harvard U. Press.

Slobin, D. I. (1985). Cross-linguistic evidence for the language-making capacity. In D. I. Slobin (ed.) *The Cross-LInguistic Study of Language Acquisition.* Vol 2. Theoretical Issues. London: Erlbaum.

Sorace, A. (1998). Residual L2 optionality and L1 attrition. Paper presented at *EUROSLA 8.* Paris 12 September.

Speas, M. (1993). Null arguments in a theory of economy of projections. In Benedicto, E. and Runner, J. (eds.) *University of Massachusetts Occasional Papers* 17 (functional projectionns) Amherst, MA:GLSA.

BEST COPY AVAILABLE

Truscott, J. (1998) Noticing in second language acquisition: a critical review. *Second Language Research* 14:103-135.

Scheiderman, E. and C. Desmarais (1988). The talented language learner: some preliminary findings. *Second Language Research* 4:91-109.

Schmidt, R. (1990) The role of consciousness in second language learning. *Applied Linguistics* 11:129-158.

Schwartz, B.D. (1993). On explicit and negative data effecting and affecting competence and linguistic behavior. *Studies in Second Language Acquisition* 15:147-163.

Schwartz, B.D. and M. Gubala-Ryzak. (1992). Learnability and grammar reorganization in L2A: Against negative evidence causing the unlearning of verb movement. *Second Language Research* 8:1-38.

Skehan, P. (1998) *A Cognitive Approach to Language Learning*. Oxford: Oup.

vanPatten, B. and S. Oikkenon. (1996). Explanation vs. structured input in processing instruction. *Studies in Second Language Acquisition* 18:495-510.

Vainikka, A. & M. Young-Scholten. (1996) Gradual development of L2 phrase structure, *Second Language Research* 12:7-39.

Vainikka, A. & M. Young-Scholten. (1998). Morphosyntactic Triggers in Adult SLA. In M. -L. Beck (ed.) *Morphology and its Interfaces*. Amsterdam: Benjamins.

White, L. (1989). Universal Grammar and Second Language Acquisition. Amsterdam: Benjamins.

White, L. (1991). Adverb placement in second language acquisition: some effects of positive and negative evidence in the classroom. *Second Language Research* 7: 133-161.